

CLAIMS

1. A method for reducing a spurious frequency response in direct
5 conversion and very low intermediate frequency receivers, comprising:

mixing a received RF signal in a chopping mixer operating at a first
chopper frequency;

determining a quality of the mixed RF signal by checking a bit error rate
(BER) thereof;

10 operating the chopping mixer at a chopper frequency different than the
first chopper frequency if the BER of the mixed RF signal exceeds a specified error
level.

15 2. The method of Claim 1, determining the quality of the mixed RF
signal after changing the chopper frequency, changing the RF signal by receiving a
different RF signal on a different channel of the receiver if the BER of the mixed RF
signal exceeds the specified error level after changing the chopper frequency.

20 3. The method of Claim 2, operating the receiver in a normal mode if
the BER of the mixed RF signal does not exceed the specified error level after
changing the chopper frequency.

25 4. The method of Claim 1, determining a strength of the mixed RF
signal before determining the quality thereof by determining whether the mixed RF
signal strength is within a specified range, determining the quality of the mixed RF
signal if the mixed RF signal strength is within the specified range.

5 6. The method of Claim 4, if the mixed RF signal strength is below the specified range, changing the RF signal by receiving the RF signal on a different channel of the receiver.

10 7. The method of Claim 1, changing the RF signal by receiving the RF signal on a different channel of the receiver if the BER of the mixed RF signal exceeds the specified error level after changing the chopper frequency.

15 8. The method of Claim 1, verifying that a BER of the mixed RF signal that exceeds the specified error level is due to a chopper spur mixing with an RF blocker signal by rechecking the BER of the mixed RF signal after disabling the chopping mixer.

20 9. The method of Claim 7, changing the chopper frequency if the BER of the mixed RF signal improves after disabling the chopping mixer.

25 10. The method of Claim 8, re-determining the quality of the mixed RF signal after changing the chopper frequency.

11. The method of Claim 9, changing the RF signal by receiving the RF signal on a different channel of the receiver if the BER exceeds the specified error level after changing the chopper frequency.

11. The method of Claim 9, operating the receiver in a normal mode if the BER does not exceed the specified error level after changing the chopper frequency.

12. A method in a mobile wireless communication device that receives RF signals on a plurality of channels, comprising:

mixing RF signals received on the plurality of channels with a chopping mixer operating at a first chopper frequency;

establishing a confidence factor for each of the channels by checking the corresponding RF signals for corrupted data, the confidence factor bearing a relation to data corrupted;

changing the chopper frequency to a frequency different than the first chopper frequency only for RF signals received on channels with a confidence factor lower than a confidence factor threshold based on the confidence factors of the other channels.

13. The method of Claim 12, determining a quality of the mixed RF signals by checking a bit error rate (BER) thereof, determining whether the confidence factor of the mixed RF signals is lower than the confidence factor threshold if the BER of the mixed RF signals exceeds a specified error level.

14. The method of Claim 13, determining a strength of the mixed RF signals before determining the quality thereof, determining the quality of the RF signals if the signal strength it is within a specified range.

15. The method of Claim 12, determining a quality of the mixed RF signals after changing the chopper frequency, changing the RF signals by receiving RF signals on different channels of the receiver if the BER of the RF signals exceed a specified error level after changing the chopper frequency.

16. A method for reducing a spurious frequency response in direct conversion and very low intermediate frequency receivers operating in a channel hopping mode, comprising:

mixing RF signals received on a plurality of channels with a chopping mixer at a first chopper frequency;

establishing a confidence factor for each of the RF signals by checking the RF signals for corrupted data, the confidence factor bearing a relation to data corrupted;

changing the chopper frequency of the chopping mixer to a frequency other than the first chopper frequency only for the RF signals having confidence factors lower than the confidence factors of the other RF signals.

17. The method of Claim 16, determining a quality of the RF signals by checking a bit error rate (BER) thereof after mixing, determining whether the confidence factor of the RF signals is lower than the confidence factors of the other signals if the BER of the RF signals exceed a specified error level.

18. The method of Claim 17, determining a strength of the mixed RF signals before determining the quality thereof, determining the quality of the mixed RF signals if the signal strength thereof it is within a specified range.

19. The method of Claim 16, determining a quality of the mixed RF signals after changing the chopper frequency, changing the RF signals by receiving RF signals on different channels of the receiver if the BER of the mixed RF signals
5 exceed the specified error level after changing the chopper frequency.

20. A method for reducing a spurious frequency response in direct conversion and very low intermediate frequency receivers, comprising:

10 mixing a received RF signal in a chopping mixer operating at a first chopper frequency;

establishing a confidence factor for the RF signal received by checking the RF signal for corrupted data, the confidence factor bearing a relation to data corrupted;

15 changing the chopper frequency of the chopping mixer to a frequency other than the first chopper frequency only if the confidence factor is lower than a confidence factor threshold.

20 21. The method of Claim 20, determining a quality of the RF signal by checking a bit error rate (BER) thereof after mixing, determining whether the confidence factor of the RF signal is lower than the confidence factor threshold if the BER of the RF signal exceeds a specified error level.

25 22. The method of Claim 21, determining a strength of the mixed RF signal before determining the quality thereof, determining the quality of the mixed RF signal only if the signal strength thereof it is within a specified range.

23. The method of Claim 20, determining a confidence factor of the
mixed RF signal after changing the chopper frequency, changing the RF signal by
receiving RF signal on a different channel of the receiver if the confidence factor is
below confidence factor threshold after changing the chopper frequency.

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